

SEQUENCE LISTING

<110> Klee, Harry J.
Lashbrook, Coralie
Shrode, Lori

<120> Materials and Methods for Tissue-Specific Targeting of Ethylene
Insensitivity in Transgenic Plants

<130> UF-325XC1

<150> US 60/390,385

<151> 2002-06-21

<160> 9

<170> PatentIn version 3.2

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<211> 738

<212> PRT

<213> pLBS107 construct

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Met Glu Val Cys Asn Cys Ile Glu Pro Gln Trp Pro Ala Asp Glu Leu
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Leu Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Ile Ala Tyr
              20              25              30

Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
 35              40              45

Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
50              55              60

Tyr Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Thr Thr His Ser
65              70              75              80

Arg Thr Val Ala Leu Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
              85              90              95

Val Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu
              100              105              110

Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu
              115              120              125

Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
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His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
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Thr Ile Leu Lys Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu
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 Glu Glu Cys Ala Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln
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 Ile Gln Leu Pro Val Ile Asn Gln Val Phe Gly Thr Ser Arg Ala Val
 210 215 220
 Lys Ile Ser Pro Asn Ser Pro Val Ala Arg Leu Arg Pro Val Ser Gly
 225 230 235 240
 Lys Tyr Met Leu Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His
 245 250 255
 Leu Ser Asn Phe Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg
 260 265 270
 Tyr Ala Leu Met Val Leu Met Leu Pro Ser Asp Ser Ala Arg Gln Trp
 275 280 285
 His Val His Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln Val Ala
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 Val Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg Ala Arg
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 Asp Leu Leu Met Glu Gln Asn Val Ala Leu Asp Leu Ala Arg Arg Glu
 325 330 335
 Ala Glu Thr Ala Ile Arg Ala Arg Asn Asp Phe Leu Ala Val Met Asn
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 His Glu Met Arg Thr Pro Met His Ala Ile Ile Ala Leu Ser Ser Leu
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 370 375 380
 Ile Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Met Asn Asp Val Leu
 385 390 395 400
 Asp Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Glu Leu Gly Thr
 405 410 415
 Phe Asn Leu His Thr Leu Phe Arg Glu Val Leu Asn Leu Ile Lys Pro
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Phe Val Val Pro Thr Gly Ser His Phe Tyr Leu Arg Val Lys Val Lys		
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Asp Ser Gly Ala Gly Ile Asn Pro Gln Asp Ile Pro Lys Ile Phe Thr		
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Lys Phe Ala Gln Thr Gln Ser Leu Ala Thr Arg Ser Ser Gly Gly Ser		
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Phe Asp Val Lys Leu Gly Ile Ser Glu Arg Ser Asn Glu Ser Lys Gln		
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Ser Gly Ile Pro Lys Val Pro Ala Ile Pro Arg His Ser Asn Phe Thr		
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Ser Phe Gly Leu Asp Gly Val Leu Leu Lys Pro Val Ser Leu Asp Asn		
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          20           25           30

Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
          35           40           45

Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
          50           55           60

Tyr Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Thr Thr His Ser
65           70           75           80

Arg Thr Val Ala Leu Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
          85           90           95

Val Ser Cys Ala Thr Thr Leu Met Leu Val His Ile Ile Pro Asp Leu
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Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu
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Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
          130          135          140

His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
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Thr Ile Leu Lys Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu
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Glu Glu Cys Ala Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln
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Leu Ser Tyr Thr Leu Arg His Gln His Pro Val Glu Tyr Thr Val Pro
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Lys Tyr Met Leu Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His
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 His Val His Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln Val Ala
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 Val Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg Ala Arg
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 Ala Glu Thr Ala Ile Arg Ala Arg Asn Asp Phe Leu Ala Val Met Asn
 340 345 350
 His Glu Met Arg Thr Pro Met His Ala Ile Ile Ala Leu Ser Ser Leu
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 Leu Gln Glu Thr Glu Leu Thr Pro Glu Gln Arg Leu Met Val Glu Thr
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 Ile Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Met Asn Asp Val Leu
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 Phe Asn Leu His Thr Leu Phe Arg Glu Val Leu Asn Leu Ile Lys Pro
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 Arg Ile His Glu Lys Phe Thr Lys Gln Arg His Gln Arg Pro Leu Leu
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 Val Ala Leu Ser Gly Asn Thr Asp Lys Ser Thr Lys Glu Lys Cys Met
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 Ser Phe Gly Leu Asp Gly Val Leu Leu Lys Pro Val Ser Leu Asp Asn
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Gly Met

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 Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
 35 40 45

Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
 50 55 60
 Tyr Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Thr Thr His Ser
 65 70 75 80
 Arg Thr Val Ala Leu Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
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 Val Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu
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 Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu
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 Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
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 His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
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 Glu Glu Cys Ala Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln
 180 185 190
 Leu Ser Tyr Thr Leu Arg His Gln His Pro Val Glu Tyr Thr Val Pro
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 Ile Gln Leu Pro Val Ile Asn Gln Val Phe Gly Thr Ser Arg Ala Val
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 Lys Ile Ser Pro Asn Ser Pro Val Ala Arg Leu Arg Pro Val Ser Gly
 225 230 235 240
 Lys Tyr Met Leu Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His
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 Leu Ser Asn Phe Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg
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 Tyr Ala Leu Met Val Leu Met Leu Pro Ser Asp Ser Ala Arg Gln Trp
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 His Val His Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln Val Ala
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 Val Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg Ala Arg
 305 310 315 320
 Asp Leu Leu Met Glu Gln Asn Val Ala Leu Asp Leu Ala Arg Arg Glu
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 Ala Glu Thr Ala Ile Arg Ala Arg Asn Asp Phe Leu Ala Val Met Asn

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Ile Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Met Asn Asp Val Leu		
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Asp Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Glu Leu Gly Thr		
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Leu Pro Glu Phe Val Val Gly Asp Glu Lys Arg Leu Met Gln Ile Ile		
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Leu Asn Ile Val Gly Asn Ala Val Lys Phe Ser Lys Gln Gly Ser Ile		
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Phe Val Val Pro Thr Gly Ser His Phe Tyr Leu Arg Val Lys Val Lys		
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Asp Ser Gly Ala Gly Ile Asn Pro Gln Asp Ile Pro Lys Ile Phe Thr		
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Lys Phe Ala Gln Thr Gln Ser Leu Ala Thr Arg Ser Ser Gly Gly Ser		
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Gly Leu Gly Leu Ala Ile Ser Lys Arg Phe Val Asn Leu Met Glu Gly		
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Asn Ile Trp Ile Glu Ser Asp Gly Leu Gly Lys Gly Cys Thr Ala Ile		
565	570	575
Phe Asp Val Lys Leu Gly Ile Ser Glu Arg Ser Asn Glu Ser Lys Gln		
580	585	590
Ser Gly Ile Pro Lys Val Pro Ala Ile Pro Arg His Ser Asn Phe Thr		
595	600	605
Gly Leu Lys Val Leu Val Met Asp Glu Asn Gly Val Ser Arg Met Val		
610	615	620
Thr Lys Gly Leu Leu Val His Leu Gly Cys Glu Val Thr Thr Val Ser		
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Ser Asn Glu Glu Cys Leu Arg Val Val Ser His Glu His Lys Val Val
645 650 655

Phe Met Asp Val Cys Met Pro Gly Val Glu Asn Tyr Gln Ile Ala Leu
660 665 670

Arg Ile His Glu Lys Phe Thr Lys Gln Arg His Gln Arg Pro Leu Leu
675 680 685

Val Ala Leu Ser Gly Asn Thr Asp Lys Ser Thr Lys Glu Lys Cys Met
690 695 700

Ser Phe Gly Leu Asp Gly Val Leu Leu Lys Pro Val Ser Leu Asp Asn
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Ile Arg Asp Val Leu Ser Asp Leu Leu Glu Pro Arg Val Leu Tyr Glu
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Gly Met

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35 40 45

Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Phe Val Leu
50 55 60

Tyr Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Thr Thr His Ser
65 70 75 80

Arg Thr Val Ala Leu Val Met Thr Thr Ala Lys Val Leu Thr Ala Val
85 90 95

Val Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu
100 105 110

Leu Ser Val Lys Thr Arg Glu Leu Phe Leu Lys Asn Lys Ala Ala Glu
115 120 125

Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
130 135 140

His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
 145 150 155 160
 Thr Ile Leu Lys Thr Thr Leu Val Glu Leu Gly Arg Thr Leu Ala Leu
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 Glu Glu Cys Ala Leu Trp Met Pro Thr Arg Thr Gly Leu Glu Leu Gln
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 Leu Ser Tyr Thr Leu Arg His Gln His Pro Val Glu Tyr Thr Val Pro
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 Ile Gln Leu Pro Val Ile Asn Gln Val Phe Gly Thr Ser Arg Ala Val
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 Lys Ile Ser Pro Asn Ser Pro Val Ala Arg Leu Arg Pro Val Ser Gly
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 Lys Tyr Met Leu Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His
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 Leu Ser Asn Phe Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg
 260 265 270
 Tyr Ala Leu Met Val Leu Met Leu Pro Ser Asp Ser Ala Arg Gln Trp
 275 280 285
 His Val His Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln Val Ala
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 Val Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg Ala Arg
 305 310 315 320
 Asp Leu Leu Met Glu Gln Asn Val Ala Leu Asp Leu Ala Arg Arg Glu
 325 330 335
 Ala Glu Thr Ala Ile Arg Ala Arg Asn Asp Phe Leu Ala Val Met Asn
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 His Glu Met Arg Thr Pro Met His Ala Ile Ile Ala Leu Ser Ser Leu
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 Leu Gln Glu Thr Glu Leu Thr Pro Glu Gln Arg Leu Met Val Glu Thr
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 Ile Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Met Asn Asp Val Leu
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 Asp Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Glu Leu Gly Thr
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 Phe Asn Leu His Thr Leu Phe Arg Glu Val Leu Asn Leu Ile Lys Pro
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Ile Ala Val Val Lys Lys Leu Pro Ile Thr Leu Asn Leu Ala Pro Asp
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 Leu Pro Glu Phe Val Val Gly Asp Glu Lys Arg Leu Met Gln Ile Ile
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 Leu Asn Ile Val Gly Asn Ala Val Lys Phe Ser Lys Gln Gly Ser Ile
 465 470 475 480
 Ser Val Thr Ala Leu Val Thr Lys Ser Asp Thr Arg Ala Ala Asp Phe
 485 490 495
 Phe Val Val Pro Thr Gly Ser His Phe Tyr Leu Arg Val Lys Val Lys
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 Asp Ser Gly Ala Gly Ile Asn Pro Gln Asp Ile Pro Lys Ile Phe Thr
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 Lys Phe Ala Gln Thr Gln Ser Leu Ala Thr Arg Ser Ser Gly Gly Ser
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 545 550 555 560
 Asn Ile Trp Ile Glu Ser Asp Gly Leu Gly Lys Gly Cys Thr Ala Ile
 565 570 575
 Phe Asp Val Lys Leu Gly Ile Ser Glu Arg Ser Asn Glu Ser Lys Gln
 580 585 590
 Ser Gly Ile Pro Lys Val Pro Ala Ile Pro Arg His Ser Asn Phe Thr
 595 600 605
 Gly Leu Lys Val Leu Val Met Asp Glu Asn Gly Val Ser Arg Met Val
 610 615 620
 Thr Lys Gly Leu Leu Val His Leu Gly Cys Glu Val Thr Thr Val Ser
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 Ser Asn Glu Glu Cys Leu Arg Val Val Ser His Glu His Lys Val Val
 645 650 655
 Phe Met Asp Val Cys Met Pro Gly Val Glu Asn Tyr Gln Ile Ala Leu
 660 665 670
 Arg Ile His Glu Lys Phe Thr Lys Gln Arg His Gln Arg Pro Leu Leu
 675 680 685
 Val Ala Leu Ser Gly Asn Thr Asp Lys Ser Thr Lys Glu Lys Cys Met
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 Ser Phe Gly Leu Asp Gly Val Leu Leu Lys Pro Val Ser Leu Asp Asn
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 Ile Arg Asp Val Leu Ser Asp Leu Leu Glu Pro Arg Val Leu Tyr Glu

725

730

735

Gly Met

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 Phe Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val
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 Phe Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu
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 Leu Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg
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 cat gtg aga atg ttg act cat gag att aga agc act tta gat aga cat 480
 His Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His
 145 150 155 160

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Asn	Cys	Glu	Asp	Glu	Gly	Asn	Ser	Phe	Trp	Ser	Thr	Glu	Asn	Ile	Leu
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Glu	Thr	Gln	Arg	Val	Ser	Asp	Phe	Leu	Ile	Ala	Val	Ala	Tyr	Phe	Ser
	50					55					60				

Ile	Pro	Ile	Glu	Leu	Leu	Tyr	Phe	Val	Ser	Cys	Ser	Asn	Val	Pro	Phe	65	70	75	80
Lys	Trp	Val	Leu	Phe	Glu	Phe	Ile	Ala	Phe	Ile	Val	Leu	Cys	Gly	Met	85	90	95	
Thr	His	Leu	Leu	His	Gly	Trp	Thr	Tyr	Ser	Ala	His	Pro	Phe	Arg	Leu	100	105	110	
Met	Met	Ala	Phe	Thr	Val	Phe	Lys	Met	Leu	Thr	Ala	Leu	Val	Ser	Cys	115	120	125	
Ala	Thr	Ala	Ile	Thr	Leu	Ile	Thr	Leu	Ile	Pro	Leu	Leu	Leu	Lys	Val	130	135	140	
Lys	Val	Arg	Glu	Phe	Met	Leu	Lys	Lys	Lys	Ala	His	Glu	Leu	Gly	Arg	145	150	155	160
Glu	Val	Gly	Leu	Ile	Leu	Ile	Lys	Lys	Glu	Thr	Gly	Phe	His	Val	Arg	165	170	175	
Met	Leu	Thr	Gln	Glu	Ile	Arg	Lys	Ser	Leu	Asp	Arg	His	Thr	Ile	Leu	180	185	190	
Tyr	Thr	Thr	Leu	Val	Glu	Leu	Ser	Lys	Thr	Leu	Gly	Leu	Gln	Asn	Cys	195	200	205	
Ala	Val	Trp	Met	Pro	Asn	Asp	Gly	Gly	Thr	Glu	Met	Asp	Leu	Thr	His	210	215	220	
Glu	Leu	Arg	Gly	Arg	Gly	Gly	Tyr	Gly	Gly	Cys	Ser	Val	Ser	Met	Glu	225	230	235	240
Asp	Leu	Asp	Val	Val	Arg	Ile	Arg	Glu	Ser	Asp	Glu	Val	Asn	Val	Leu	245	250	255	
Ser	Val	Asp	Ser	Ser	Ile	Ala	Arg	Ala	Ser	Gly	Gly	Gly	Gly	Asp	Val	260	265	270	
Ser	Glu	Ile	Gly	Ala	Val	Ala	Ala	Ile	Arg	Met	Pro	Met	Leu	Arg	Val	275	280	285	
Ser	Asp	Phe	Asn	Gly	Glu	Leu	Ser	Tyr	Ala	Ile	Leu	Val	Cys	Val	Leu	290	295	300	
Pro	Gly	Gly	Thr	Pro	Arg	Asp	Trp	Thr	Tyr	Gln	Glu	Ile	Glu	Ile	Val	305	310	315	320
Lys	Val	Val	Ala	Asp	Gln	Val	Thr	Val	Ala	Leu	Asp	His	Ala	Ala	Val	325	330	335	
Leu	Glu	Glu	Ser	Gln	Leu	Met	Arg	Glu	Lys	Leu	Ala	Glu	Gln	Asn	Arg	340	345	350	

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 Asn Ala Phe Gln Lys Thr Met Ser Glu Gly Met Arg Arg Pro Met His
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 385 390 395 400
 Glu Gln Lys Met Ile Val Asp Thr Met Val Lys Thr Gly Asn Val Met
 405 410 415
 Ser Asn Leu Val Gly Asp Ser Met Asp Val Pro Asp Gly Arg Phe Gly
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 Thr Glu Met Lys Pro Phe Ser Leu His Arg Thr Ile His Glu Ala Ala
 435 440 445
 Cys Met Ala Arg Cys Leu Cys Leu Cys Asn Gly Ile Arg Phe Leu Val
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 Asp Ala Glu Lys Ser Leu Pro Asp Asn Val Val Gly Asp Glu Arg Arg
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 Val Phe Gln Val Ile Leu His Ile Val Gly Ser Leu Val Lys Pro Arg
 485 490 495
 Lys Arg Gln Glu Gly Ser Ser Leu Met Phe Lys Val Leu Lys Glu Arg
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 Gly Ser Leu Asp Arg Ser Asp His Arg Trp Ala Ala Trp Arg Ser Pro
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 Ala Ser Ser Ala Asp Gly Asp Val Tyr Ile Arg Phe Glu Met Asn Val
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 545 550 555 560
 Asp Gln Glu Val Gly Asp Val Arg Phe Ser Gly Gly Tyr Gly Leu Gly
 565 570 575
 Gln Asp Leu Ser Phe Gly Val Cys Lys Lys Val Val Gln Leu Ile His
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 Gly Asn Ile Ser Val Val Pro Gly Ser Asp Gly Ser Pro Glu Thr Met
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 Ser Leu Leu Leu Arg Phe Arg Arg Arg Pro Ser Ile Ser Val His Gly
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Thr	Ala	Val	Ser	Ser	Gly	Phe	Asp	Cys	Leu	Thr	Ala	Ile	Ala	Pro	Gly
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Ser	Ser	Ser	Pro	Ser	Thr	Ser	Phe	Gln	Val	Val	Val	Leu	Asp	Leu	Gln
			690				695					700			
Met	Ala	Glu	Met	Asp	Gly	Tyr	Glu	Val	Ala	Met	Arg	Ile	Arg	Ser	Arg
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Ser	Trp	Pro	Leu	Ile	Val	Ala	Thr	Thr	Val	Ser	Leu	Asp	Glu	Glu	Met
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Trp	Asp	Lys	Cys	Ala	Gln	Ile	Gly	Ile	Asn	Gly	Val	Val	Arg	Lys	Pro
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Val	Val	Leu	Arg	Ala	Met	Glu	Ser	Glu	Leu	Arg	Arg	Val	Leu	Leu	Gln
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Ala	Asp	Gln	Leu	Leu											
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<210> 7
 <211> 2893
 <212> DNA
 <213> Amino acid sequence alignment of ETR2

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<210> 8
<211> 1622
<212> DNA
<213> pLBS107 construct

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atcactggag gtaaacaaaa agaaaggtaa agaaaggctc ctaatcagat gaaaatttct 180
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aagtcaccct tttttaatca aaactacaac agtgaaggaa actacgaata atctatcatt 1560
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<210> 9
<211> 11606
<212> DNA
<213> pLBS107 construct

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Met Lys Tyr Gln Tyr Ile Ser Asp Phe Phe Ile Ala Ile Ala Tyr Phe	
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Ser Ile Pro Leu Glu Leu Ile Tyr Phe Val Lys Lys Ser Ala Val Phe	
35 40 45	

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Pro Tyr Arg Trp Val Leu Val Gln Phe Gly Ala Phe Ile Val Leu Tyr	
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Gly Ala Thr His Leu Ile Asn Leu Trp Thr Phe Thr Thr His Ser Arg	
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Thr Val Ala Leu Val Met Thr Thr Ala Lys Val Leu Thr Ala Val Val	
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Ser Cys Ala Thr Ala Leu Met Leu Val His Ile Ile Pro Asp Leu Leu	
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Asp Arg Glu Met Gly Leu Ile Arg Thr Gln Glu Glu Thr Gly Arg His	
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Val Arg Met Leu Thr His Glu Ile Arg Ser Thr Leu Asp Arg His Thr	
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230 235 240	
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Tyr Met Leu Gly Glu Val Val Ala Val Arg Val Pro Leu Leu His Leu	
245 250 255	
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Ser Asn Phe Gln Ile Asn Asp Trp Pro Glu Leu Ser Thr Lys Arg Tyr	

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Val His Glu Leu Glu Leu Val Glu Val Val Ala Asp Gln Val Ala Val			
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gct ctc tca cat gct gcg atc cta gaa gag tcg atg cga gct agg gac			2636
Ala Leu Ser His Ala Ala Ile Leu Glu Glu Ser Met Arg Ala Arg Asp			
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Glu Met Arg Thr Pro Met His Ala Ile Ile Ala Leu Ser Ser Leu Leu			
	355	360	365
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Gln Glu Thr Glu Leu Thr Pro Glu Gln Arg Leu Met Val Glu Thr Ile			
370	375	380	385
ctt aaa agt agt aac ctt ttg gca act ttg atg aat gat gtc tta gat			2876
Leu Lys Ser Ser Asn Leu Leu Ala Thr Leu Met Asn Asp Val Leu Asp			
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Leu Ser Arg Leu Glu Asp Gly Ser Leu Gln Leu Glu Leu Gly Thr Phe			
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Asn Leu His Thr Leu Phe Arg Glu Val Leu Asn Leu Ile Lys Pro Ile			
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cca gaa ttt gtt gtt ggg gat gag aaa cgg cta atg cag ata ata tta			3068
Pro Glu Phe Val Val Gly Asp Glu Lys Arg Leu Met Gln Ile Ile Leu			
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Asn Ile Val Gly Asn Ala Val Lys Phe Ser Lys Gln Gly Ser Ile Ser			
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Phe	Ala	Gln	Thr	Gln	Ser	Leu	Ala	Thr	Arg	Ser	Ser	Gly	Gly	Ser	Gly		
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